DOCUMENT RESUME

ED 216 065 UD 022 239

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TITLE Differential Effects of Organizational Processes on High and Low Achieving Students.
PUB DATE Mar 82
NOTE 21p.; Paper presented at the Annual Meeting of the American Educational Research Association (New York, NY, March, 1982).

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Academic Achievement; *Administrator Characteristics; Educational Environment; Educationally Disadvantaged; Educational Needs; *Educational Practices; Elementary Education; Elementary School Students; High Achievement; *Job Performance; *Leadership Styles; *Student Development

ABSTRACT

Pupils, teachers, and principals in urban elementary schools were interviewed to determine how administrative leadership styles and types of feedback mechanisms affect the academic achievement of two groups of pupils: those enrolled in Title I remedial reading programs, and those enrolled in the regular curriculum. Two components of administrative leadership were investigated: a principal's concern for group/person maintenance, as demonstrated in his ability to consider teachers' opinions and needs in decision making; and his emphasis on task, determined by his familiarity with classrooms and clasroom strategies. The types of feedback mechanisms were the degree to which teachers monitored pupils' work and progress, and the school's concern for pupil socialization and development. It was found that while a task oriented principal might seek to influence educational processes more systematically than a person oriented principal, the latter was more likely to elicit stronger response or commitment. Children with remedial needs were observed to respond to school management practices oriented toward social integration (group maintenance and pupil socialization), while children in the regular curriculum were found to respond better to practices oriented toward academic intensity (task orientation and classwork monitoring). The results suggest that improving academic achievement requires the use of different methods among different groups of pupils. (MJL)

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Differential Effects of Organizational Processes on High and Low Achieving Students

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Presented at the Annual Meeting of the American Educational Research Association, New York, March 1982

UD 022 239

OBJECTIVE

The purpose of this study is to assess the impact of selected organizational processes on the achievement of two groups of pupils with different educational needs. The organizational variables are administrative leadership styles and types of feedback mechanisms used with students. The two groups of pupils include, on one hand, those in need of remedial reading and who are enrolled in the Title I program for this service; on the other hand, there are those who do not have such a need, and who follow the regular curriculum.

Theoretical Context

In recent studies about school effectiveness, the focus has shifted markedly from the organizational structure--what goes into an organization--to organizational processes--what is going on within an organization (Rutter et al, 1979; Denton, Kracht, Mac Namara, 1980). The work on organizational structure evaluated the impact of such variables as school size, complexity, per-pupil expenditures, social make-up, etc..., and found that variations in those characteristics did not matter very much (Coleman, 1966; Jencks, 1972). The research on organizational processes covers instructional time, discipline patterns, communication channels, school climate, etc....and concludes that "schools do make a difference."

The process variables can be divided into two major categories: one concerning teaching/learning strategies, the other concerning school management (as termed by Wellisch et al, 1978). More attention (and acceptance) have been given to variables in the first category than to those in the second category. This may be another reflection of the emphasis on instructional (process) rather than institutional (structure) practices. But one needs also to note that, while the findings on learning strategies have been somewhat consistent

from sample to sample, this has not been the case with school management issues. Certainly, much progress has been made since Kiesling's sharp verdict that educational researchers are "abysmally ignorant of the traits of a good school manager" (Kiesling, 1971, p. 38). Some light has been shed, for example, on the relationship of administrative leadership to staff morale (Fiskel & Potter, 1981). But over the past decade, the various studies that have examined principals' styles and their significance for student academic attainment, have yielded contradictory results. Indeed, some authors have found that the degree of control exercised by a principal was positively related to pupil achievement (California School Effectiveness Study, 1977; Rutter et al., 1979; Weber, 1971; Wellisch, 1978). Other researchers have reported a negative coefficient for that relationship (Anderson, 1971; Miskel, 1977).

A number of factors may be responsible for such inconsistency. First of all, there seems to be a certain amount of confusion concerning the processes of administrative leadership and the structural characteristic of an organization: the often used contrast between the authoritarian style and the democratic style in the decision-making process seems rather redundant with the description of an organization as structurally centralized or decentralized. Secondly, full consideration has rarely been given to the diversity of the educational task to be attended by the principal. Task diversity can make a particular leadership style relevant or irrelevant to the determination of staff morale or student academic progress. Given the constraints that a situation places on the exercise of leadership, Hall (1977) pointed out that the importance of the leadership variable might have been exaggerated.

The implication of such a propostion is that leadership style in itself is not the crucial thing to understand; more important may be the extent to which the leader's style has been embodied into educational practices.

Understanding of the interaction between leaders' style and leaders'

situation has been considerably developed by Fiedler (1967, 1969), under the name of contingency theory of leadership. In essence, the theory asserts that the extent of a leader's effectiveness is a function of both the person's personal orientation and the demands of the task at hand. Following Halprin and Winer (1952), Bales (1955), Fiedler identified two major dimensions of leadership: a task dimension and a relationship dimension. Task orientation refers to a leader's emphasis on the means of "getting the group moving toward its designated goal" (Wrightsman, p. 496). Relationship-motivated leaders have "a group-maintenance orientation, in which a leader is concerned with the group members' morale and cohensiveness" (Wrightsman, ibid)....and tends to rely on friendship, communication, and participation in decision-making. Halpin and Winer (1952), who call these two dimensions "initiating structure" and "consideration," contend that the two factors account for as much as 75% of the variance in leadership behavior.

In parallel to those leadership functions, one must put the characteristics of the task. The nature of the task of an organization refers to the actions that organization members perform upon an object in order to make some change in that object. These actions or activities are generally influenced by two things: the amount of structure in the task which enhances the activities, and its degree of uncertainty which places constraints on the activities. Task structure is defined by three indices: a) the degree of goal clarity (what the group is to acheive); b) the extent of solution specificity (how the goal is to be reached); c) the possibility of decision verifiability (how close to the goal does the group get).

Uncertainty pertains to the degree of uniformity in the object to be processed, and/or to the adequacy of the knowledge-base for dealing with the exceptions that occur (Perrow, 1967). To reduce uncertainty and achieve coordination, organizations rely on two basic processes: programming, which sets

"a clear blueprint for action" by defining some external standards; socialization, which aims at building motivation and loyalty (Hage, 1980, p. 352). "The selection of a particular technique is often determined by feedback from the object itself" (Thompson, 1967, p. 17).

Evidence, of a theoretical and an empirical nature, exists to show variations within a single school, in both the degree of task structure and the degree of task uncertainty. Variations in the task structure are generated because the urban school does not pursue a unique goal: as a social organization, it has both didactic and custodial functions (Madhere, 1981), which are not always well articulated. Variations in the degree of task uncertainty are associated with the fact that pupils are not alike in terms of their abilities, personalities and values. Nowadays, a variety of special programs are being implemented in the schools, in recognition of the fact that teaching/learning perfomance is a complex and uncertain task.

The ESEA Title I for compensatory education may be the largest or the most typical of those special programs. The task of building up the deficient skills of pupils enrolled in that program may be less solution-specific, more uncertain than that of working with more successful or able students.

Research Questions

The present investigation has selected a basic proposition from Fiedler's contingency theory of leadership, to see how useful it can be for understanding the educational climate of elementary public schools in an urban district. Indices representing the two components of administrative leadership--a principal's concern for group-maintenance, and his/her emphasis on task--were obtained. A principal is highly task oriented if he/she is truly familiar with teachers' classroom strategies, if he/she visits the classroom and gives feedback to teachers about their performance. A principal is highly person oriented if he/she brings teachers into the decision-making process, if he/she tries to

understand their problems/needs and offers encouragement and support.

As mentioned earlier, leadership styles are important only if they are trans lated into educational practices. So, consideration has been given to two kinds of educational practices or feedback mechanisms used with students: degree of classwork monitoring and concern for socialization. Classwork monitoring is intense in a school if the teachers assign important homework regularly, if they communicate often to keep track of pupil progress, and if they hold high expectations for pupils. Socialization is valued in a school if there is a limited emphasis on disciplinary measures and frequent use of reward, if the staff shows interest not just in students' "savoir" (cognitive development) but in their "savoir-faire" (socio-emotional development) as well, and if the principal maintains constant relationship with parents and the community in general. From that perspective, three basic questions have been addressed:

1. Of the two components of leadership--concern for task and group maintenance --which one influences educational practices more significantly?
2. What is the impact of school management practices--including both administrative leadership and types of feedback mechanisms used with students--on school effectiveness?
3. Do management styles affect differently the performance of pupils with remedial needs (low achieving pupils) and that of pupils without such needs (high achieving students)? If such differences exist, the expectations are that school management practices will be more critical for the former group of pupils than for the latter. To put it in specific terms:

    a) Highly task-oriented principals (i.e. those who seek to improve the task structure) will be more effective than person-oriented principals in positively influencing the performance of pupils with remedial needs.

    b) The feedback mechanisms (via which task uncertainty is reduced) are likely to affect more strongly the performance of low-achieving students than that of high achieving students.

Method

The population under study includes all 52 elementary schools in an urban school district. The measures of task orientation, group maintenance orientation, classwork monitoring, and socialization are constructed from responses to questionnaire items. Questionnaires were distributed in the Spring 1981 to principals, teachers and 6th grade students. Approximately 3,000 students, 850 teachers and all 52 principals responded. A description of the various items entering into each variable has been given in the preceding section (see appendix for details on specific items). School effectiveness, as evidenced by student achievement, is measured by the mean reading scores of third and sixth grade students on the Metropolitan Achievement Tests. To study the impact of the above organizational or school management processes on students of different performance level, two groups are defined, based on student participation or non-participation in a compensatory reading program (Title I). Enrollment in the program includes approximately 40% of the student population in that district.

The data were treated through a series of canonical analyses. In the initial stage, to determine how broadly each leadership component was reflected into educational practices, first a set of three task orientation indices, then a set of three group maintenance indices was related to the two variables classwork monitoring and social reinforcement. The objective was to calculate for each set not only a canonical correlation coefficient but also a redundancy coefficient. As explained by Cooley and Lohnes (1976), redundancy is the proportion of common variance between two domains that is due to their joint dependency on an underlying factor; it is a more accurate index of commonality than the canonical R^2. The redundancy coefficient is a sum of products. When only one canonical function is involved (as is the case here), the redundancy of a domain A (and its multivariate variance) to a domain B, is simply the product of "the variance extracted from domain A...times the squared multiple or canonical correlation" (Cooley and

Lohnes, p. 211). Just like in factor analysis, "the amount of the total variance in a set (or domain) accounted for by a factor (or canonical variate) is given by the sum of the squared loadings of the variables on that factor" (Levine, 1977). Redundancy coefficients were calculated for each leadership component and compared to one another.

In the second stage of the analysis, intended to assess school effectiveness, a second canonical procedure was carried out. This time, the predictor set included the variables classwork monitoring and social reinforcement in addition to two aggregate measures of leadership; the criterion set included four measures of a school reading performance level. The significance of the canonical correlation between the two domains was assessed with a chi-square test. The loading (size and sign) of each variable on the factor was studied to determine whether the various aspects of school effectiveness relate differently to the organizational processes.

Results

I. Task Orientation

The principal finding is that there is one major source of variance between task orientation and the variables pupil monitoring and socialization. As shown in Table 2, section 1, only one significant canonical function is obtained, for which the chi-square value is 15.3 and the alpha level .02. The loading pattern of the predictors (see Table 3), where frequency of feedback to teachers is the prominent variable, seems to define the entire canonical function as an evaluation dimension. Such a factor accounts for 31% of the variance in task orientation. The loading pattern for the second variate indicates that classwork monitoring or instructional intensity is also strongly influenced by this emphasis on evaluation (.94). The loading for pupil socialization is rather modest (-.25). But more than 47% of the variance in the entire set of feedback mechanisms can be attributed to that evaluative factor.

The canonical correlation between the two sets of variables is .667, establishing the proportion of common variance between these two components of school management at 44% (eigenvalue = .444). Using the canonical R^2, the redundancy index was calculated to be .136 for the task orientation domain, and .209 for the educational practice domain. The difference of .07 between the two indices supports a simple, almost common-sense idea: a school educational climate says more about principal's involvement in instruction, than the principal's expression of involvement would say about the school's educational climate.

II. Group Maintenance Orientation

The relationship between the group maintenance domain and the variables pupil monitoring and socialization is also captured in one canonical function. The result of the chi-square test in support of that function is equal to 18.03, and alpha is equal to .006 (see Table 2, section 2). In the loading pattern for the three predictors (see Table 4), the outstanding variable is lack of principal's support. In light of this, the underlying factor may be termed alienation. So, the less encouragement teachers receive from principals, the more limited their participation in the decision-making process, the more alienated the staff. Twenty one percent of the variance in group maintenance can be explained from this factor. The loading pattern for the second variate shows that the variable schoolwork monitoring has a strong negative relationship with alienation (-1.00), while social reinforcement,as a type of feedback mechanism, is modestly but positively associated with it (.17). Fifty one percent of the variance in the two criterion variables taken together, can be attributed to the alienation factor.

The canonical correlation betweeen the two domains is .678. This value can be transformed into an eigenvalue (proportion of common variance) equal to .462. Once the redundancy is calculated for each variable set, it becomes clear that the true overlap is less than .10 for the predictor set, and almost .24 for the criterion set. What was said earlier about task orientation remains also true in the present context: a school climate says more about a principal rapport with

staff, than the principal's concern for cohesiveness would say about the school climate.

III. Student Achievement

Given the low correlations among the four measures of student achievement (see Table 1), more than one canonical function could be expected. However, as can be seen in Table 2, section 3, only one reached statistical significance. The chi-square value for this function is 32.8. The canonical correlation of .769 indicates that school management practices are responsible for almost 60% of the variance in achievement. Table 5 presents the loading pattern for the two variates. The most significant ones among the predictors are the group maintenance variable (with a coefficient of -.95) and the classwork monitoring variable (with a coefficient of .93). The socialization measure shows a moderate relationship (-.49), while task orientation appear to be totally irrelevant. Approximately 51% of the variance in this set of four variables has been accounted for through this general function.

Turning now to the criteria of school effectiveness, it may be noted, first of all, that the relationship tends to be stronger at the third-grade level (-.76 and .60) then it is at the sixth-grade level (.40 and .17). Secondly, the impact of school management practices on achievement was predicted to be different for Title I pupils and non-Title I pupils. But the difference was expected to be in the strength of the relationship, leading possibly to two canonical functions. What is observed is a complete reversal in the direction of the relationships: the measures of achievement for the Title I pupils are marked by negative coefficients, while those for the regular curriculum pupils are loaded positively. When a rapproachment is made between the achievement measures and the various predictors, one notices that the performance of children in the first group is in line with the indices of social integration (group maintenance and pupil socialization), and the performance of children in the second group is in line with the

indices of academic intensity (task orientation and classwork monitoring). In that sense, and contrary to expectations, person-motivated principals are more effective than highly task oriented principals in influencing the performance of pupils with remedial needs. And since the two types of feedback mechanisms do not take the same sign, there is no evidence to support the assumption that feedback mechanisms are more critical to the performance of low achieving pupils than to that of more successful pupils. There is, on the contrary, a differential impact of feedback mechanisms on student performance.

Discussion & Implications

The results presented above conform to the contingency theory of leadership in more than one point. First of all, Fiedler's basic proposition that effectiveness depends to a great extent on the joint impact of situational and leaders' personal characteristics has been supported: effective schools and even effective programs within a particular school do differ significantly in regard to management practices; these practices pertain essentially to principal-staff closeness, at the administrative level, and to classwork monitoring at the classroom level. Fiedler had also observed that the quality of the rapport between the leader and the group was the single most significant determinant of a leader's influence. The present study, through its analyses of redundancy, allows one to define that relationship with greater precision. When the predictor sets are considered, the redundancy index is higher for task orientation than it is for group maintenance: so, one can expect a task-oriented principal to seek to influence the school educational practices more directly or systematically than a relationship-motivated principal. However, when the criterion set is considered, the overlap is greater with the group maintenance domain than it is with task orientation: this suggests that educational practices are more sensitive to the principal's human relations skills than they are to his/her involvement in instruction. In other words, the effort applied by the highly task oriented principal may be greater, but the

response or commitment elicited by the person-oriented principal is likely to be stronger.

What kind of explanations can be advanced for this finding? One line of thinking, emerging directly from Fiedler's work, would make use of the concept of position power. The position power of a principal--who does not have extensive authority to hire, promote, fire--may be quite limited. In that perspective, a highly task-oriented principal may be perceived by the staff as not having the means to his/her ends; in the best of cases, he/she may be able to bring only behavioral/superficial conformity on the part of the teaching staff. On the other hand, the principal with a preference for personal interaction may obtain not only behavioral conformity but attitudinal conformity/commitment on the part of teachers. This view is consistent with a previous finding by Adkinson. In a recent paper on the role of women as principals (1981), Adkinson reports that the (female) principal, who is sensitive to the personal needs of her subordinates, is usually more successful in keeping staff morale high and improving achievement.

Beyond the issue of administrative leadership, the present study demonstrates the differential effect of organizational processes on outcomes. Most organizations have several goals, and the effective accomplishment of one may have different determinants from the effective accomplishment of another. In this specific case, children with remedial reading needs seem to respond to one set of school management practices, while the performance of more successful pupils depends on another. The interesting point, however, is that each set of practice appears to be rooted into a different educational philosophy. One educational approach, which bases itself on the humanistic psychology of Maslow, Rogers and others (see Roberts, 1975), criticizes the kind of "programing" that goes on in the school, and calls for greater consideration for the socio-emotional development of children. That kind of approach seems to facilitate the achievement of pupils with remedial reading needs. An opposite point of view, which is attuned to the behavioral psychology of Gagne, Popham, and others (Roberts, ibid), emphasizes

strictly cognitive development through competency-based programs. That kind of approach seems to work with pupils already successful with the regular curriculum. In today's educational (battle) field, it is also the inspiration for the minimum-competency/back-to-basics movement. In view of the results obtained here, one has to wonder whether the competency-based approach can lead to competency with the low-acheiving pupils (for whom the program is intended).

Many social scientists have argued that, if school seems to be ineffective with some groups of children, it is because it is not intended to be effective for them in the first place. To realize global improvement in achievement, it is recommended, the same (didactic) goal must be established for every pupil. The results of this study is just a reminder that pupils do not do better just because "they are given more of what everyone else gets." The goal may be the same, but there seems to be a need to keep the means different.

VARIABLE	1	2	3	4	5	6	7	8
1 - Familiarity/Class	--	.10	.18	.34	.01			
2 - Familiarity/Inst.		--	-.11	.08	-.06			
3 - Profess. Feedbk			--	.58	-.24			
4 - Monitoring				--	.04	.59	.54	.65
5 - Soc. Reinf.					--	-.10	.05	.09
6 - Consultation						--	.75	.76
7 - Participation							--	.72
8 - Support								--

TABLE 1.A - Correlations among several indices task orientation, person orientation and feedback mechanisms.

VARIABLE	1	2	3	4	5	6	7	8
1 - Monitoring	--	+.09	+.55	+.56	-.04	+.34	-.01	+.30
2 - Soc. Reinf		--	.16	.08	+.04	-.04	.30	-.09
3 - Task Orient.			--	.54	-.02	-.11	.14	.19
4 - Group Maint.				--	.02	24	39	-.07
5 - Title I/Gr. 6					--	.38	.08	.06
6 - Non Title/Gr. 6						--	.14	-.07
7 - Title I/Gr. 3							--	-.04
8 - Non Title/Gr. 3								--

TABLE 1.B - Correlations among measures of school management practices and student achievement.

Predictor Set	Criterion Set	Function	Canonical R.	R^2	Chi-square	Degree of Freedom	Significance
Familiarity Class Familiarity Inst. Prof. Feedback	Monitoring Social Reinf.	1 2	.667 .156	.444 .024	15.32 .61	6 2	.02 .73
Consultation Participation Support	Monitoring Social Reinf.	1 2	.678 .309	.462 .096	18.03 2.52	6 2	.006 .28
Task Orient. Group Maint. Monitoring Social Reinf.	Title I/Gr. 6 Non-Title/Gr. 6 Title I/Gr. 3 Non-Title/Gr. 3	1 2 3 4	.769 .582 .285 .045	.592 .338 .081 .002	32.79 11.74 2.04 .04	16 9 4 1	.008 .22 .73 .83

TABLE 2 - Canonical functions derived from 3 sets of variables representing school management practices and student achievement.

Predictor Set		Criterion Set	
Task Orientation	+.04	Title I/Grade 6	-.17
Group Maintenance	-.95	Non-Title/Grade 6	+.40
Monitoring	+.93	Title I/Grade 3	-.76
Social reinforcement	-.49	Non-Title/Grade 3	+.60
Variance extracted	.508		.28

TABLE 5 - Loading pattern for a canonical function underlying school management variables and student achievement.

Predictor Set		Criterion Set	
(Lack of) Consultation	+.17	Monitoring	-1.00
(Lack of) Participation	+.13	Social Reinforcement	+.17
(Lack of) Support	+.76		
Variance Extracted	.206		.51
Redundancy	.096		.237

TABLE 4 - Loading pattern for a canonical function underlying measures of person-orientation and measures of feedback.

Predictor Set		Criterion Set	
Familiarity w/classroom	+.30	Monitoring	+.94
Familiarity w/instr.	+.21	Social reinforcement	-.25
Professional Feedback	+.89		
Variance Extracted	.31		.47
Redundancy	.136		.209

TABLE 3 - Loading pattern for a canonical function underlying measures of task orientation and measures of feedback.

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